

REMARKS

Claims 1, 2, 44-49, and 80-82 are allowed. Claims 24-26, 28, 34-37, 42, 43, 63-66, and 70-72 are objected to as being dependent upon a rejected base claim, but would be found allowable if rewritten to include all of the limitations of the base claim and any intervening claims. Claims 3-17 would be allowable if rewritten or amended to overcome rejections under 35 U.S.C. § 112, ¶ 2, made in the Office Action. Claim 20 stands objected to for an informality.

Claims 18-23, 27, 33, 38, 40, and 41 stand rejected under § 102(e) as being anticipated by U.S. Patent No. 6,580,582 to Caverly ("Caverly"). Claims 50-52, 55-61, and 73-79 stand rejected under § 102(e) as being anticipated by U.S. Patent No. 6,956,715 to Mueller et al. ("Mueller"). Claims 29, 30, 31, 32, 39 stand rejected under § 103(a) as being obvious over Caverly. Claims 53, 54, 62, and 67-69 stand rejected under § 103(a) as being obvious over Mueller.

Applicant respectfully requests reconsideration of this application in light of the amendments and remarks made herein. Applicant has amended the title herein in response to the Examiner's request. Applicant also has provided a replacement Abstract herein in response to the Examiner's request for an abstract within the range of 50 to 150 words. Furthermore, Applicant voluntarily submitted herewith a Supplemental Amendment ("the Supplemental Amendment") with minor amendments to the specification and figures in response to the Examiner's request to review the application for any errors and to address the Examiner's objections to the drawings. No new matter is added by virtue of any of these amendments.

Claim 34 is amended herein to include the limitations of claim 18. Claims 18, 40-42 and 73-79 are canceled without prejudice or disclaimer, and Applicant reserves its right to pursue the subject matter of these claims in one or more related applications. Applicant has made minor amendments herein to claims 1-17, 19-39, 43-72 and 80-82 to voluntarily correct certain instances of antecedent basis errors and clarify the claimed invention.

In brief, the present claimed invention is directed to a data cartridge library with capabilities of storing data cassettes in a multi-piece magazine, removeably disposing

drives in a drive bay and accommodating certain electronic circuitry in a universal bay. The library can further comprise a user interface allowing a user to communicate with the library and an entry/exit port through which a magazine can be inserted/removed.

Specification

As noted above, Applicant has submitted herein an amended title and a replacement abstract, thus overcoming the objections of paragraphs 1 and 2 of the Office Action.

Drawings

As noted above, Applicant submitted replacement figures as part of its Supplemental Amendment, which is incorporated by reference herein, and believed to overcome the objections to the drawings in paragraph 3 of the Office Action.

Claim Objections

According to numbered paragraph 4 of the Office Action, claim 20 is objected to for depending from "claim 118". Claim 20 has been amended herein to depend directly from claim 34, thus removing the "claim 118" typographical error.

According to numbered paragraph 12 of the Office Action, claims 24-26, 28, 34-37, 42, 43, 63-66 and 70-72 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 34 is amended herein to include expressly each element recited in now-cancelled claim 18, and thus is allowable. Applicant's amendment of claim 34 should not be taken as acquiescence to the rejection of claim 18.

Claims 24-26, 28, 35-37 and 43 are amended herein to depend directly or indirectly from amended allowable independent claim 34 and thus are allowable. As noted above, claim 42 is canceled herein without prejudice rendering the objection to that claim moot.

Objected to claims 63-66 and 70-72 depend directly or indirectly from independent claim 61 which distinguishes over Mueller in view of features purportedly well known for use in the art for the same reasons as set forth below (in the arguments for

Rejections Under 35 U.S.C. § 102) and therefore Applicant submits claims 63-66 and 70-72 are allowable as dependent from claim 61.

Rejections Under 35 U.S.C. § 112

Claims 3-17 and 50-60 stand rejected under 35 U.S.C. § 102, second paragraph, “as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 – line 30, the recitation of “a user interface” creates confusion as “a user interface” had already been established in line 20.” Applicant notes that, under the Allowable Subject Matter section, Examiner concludes that “Claims 3-17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. § 102, second paragraph, set forth in this Office action.”

Claim 3 is amended herein to fix an error in antecedent basis from “a user interface” to “said user interface” on line 30. Therefore, independent claim 3 and claims 4-17, which depend directly or indirectly from amended claim 3, are believed allowable.

With regard to claims 50-60, according to the Office Action, “Claim 50 – lines 7 and 25 to 28, the recitations of “Full-height drive” and “half-height drive” are not adequately defined. It is unclear if the phrases are meant to literally establish that one or more dimensions of a half-height drive is exactly half that of a full-height drive or whether the reference is to more detailed involved format specification. Also, from lines 25 to 28 it is not clear whether the first and second half-height drives would be provided in addition to a full-height drive or instead of a full height drive. Claim 55 has language similar to that of claim 50.”

Claim 50 is amended herein to clarify that two half-height drives are substantially dimensionally equivalent to one full-height drive as recited, and that “... said drive space is capable of accommodating either a full-height drive or when said drive space is separated by a partition supported by a partition mount, two half-height drives...” Applicant respectfully submits that this adequately defines the dimensional relationship between a full-height drive and a half-height drive and therefore is believed to overcome the rejection. Dependent claims 51-54 depend directly or indirectly from amended

independent claim 50 and are also believed to overcome the indefiniteness deficiency propagated from claim 50.

Claim 55 is amended herein to clarify two half-height drives as substantially dimensionally equivalent to one full-height drive as recited, "...wherein two half-height drives is substantially dimensionally equivalent to one full-height drive..." Applicant believes that this adequately defines the dimensional relationship between a full-height drive and a half-height drive and therefore is believed to overcome the rejection. Dependent claims 56-60 depend directly or indirectly from amended independent claim 55 and are also believed to overcome the indefiniteness deficiency propagated from claim 55.

Rejections Under 35 U.S.C. § 102

Claims 18-23, 27, 33, 38, 40 and 41 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Caverly.

Claim 18 is canceled without prejudice, obviating the rejection. Applicant may pursue the subject matter of the canceled claim in this or other related applications.

Claims 19-23, 27, 33, 38, are amended herein to depend directly or indirectly from allowable claim 34, which is amended herein to include expressly each element recited in its base claim, claim 18. Therefore, claims 19-23, 27, 33, 38 are also allowable.

Claims 40 and 41 are canceled without prejudice, obviating the rejection. Applicant may pursue the subject matter of the canceled claims in this or other related applications.

Claims 50-52, 55-61, and 73-79 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Mueller.

Claims 50-52, 55-61, and 73-79, stand rejected over Mueller which is directed to a storage system that comprises a plurality of "stackable" data storage libraries. Each storage library may comprise a read-write device capable of performing read/write operations on data cartridges that can be comprised in a magazine. Each library can comprise a drive system that includes a picker on a carriage that moves along a horizontal path. The carriage includes bracket members that slidably engage guide posts that stack

from one library to another enabling the carriage to move vertically between stacked libraries. Mueller describes a top library module comprising an operational envelope that is basically space allocated to accommodate portions of the drive system. In order to maximize space in a library that comprises an operational envelope, Mueller provides options for magazines comprising removable partitions. Furthermore, Mueller touches upon the option of different drive mounting hardware to accommodate a library with and without an operational envelope, but does not describe the drive mounting hardware in detail.

In contrast, as recited in amended independent claim 50, Applicant's data cartridge library recites "a drive bay, located within said interior space, comprising a first opening, a second opening, and at least one drive space that extends between said first and second openings wherein said drive space is capable of accommodating either a full-height drive or when said drive space is separated by a partition supported by a partition mount, two half-height drives;... first opening allows said transport assembly to insert/retract one of said plurality of data cartridges into/from any of said drives that is/are located in said drive space; wherein said second opening allows a user to install/remove one of said drives into/from said drive space."

Nowhere does Mueller disclose, for example, a first and second opening to a drive space capable of accommodating either one full-height drive or two half-height drives. Nowhere does Mueller disclose, for example, a partition between drives dividing a full-height drive space into two half-height drive spaces, rather Mueller only makes mention of a removable partition with respect to a magazine, "Optionally, storage magazine 17' may comprise removable partitions that can be added or removed depending on whether the storage magazine 17' is to be used with the stacker module of the storage library 20 having operational envelope 66" (Mueller, Column 6, lines 40-44). Nowhere does Mueller disclose a transport assembly that inserts or retracts a data cartridge in a drive though a first opening with capability of a user to install or remove a drive into or from a drive space through a second opening. Because Mueller fails to disclose all of the features of claim 50, it is clear that Mueller does not anticipate claim 50, and Applicant respectfully submits that claim 50 is allowable.

Dependent claim 51 depends directly from claim 50 which, as discussed above, is distinguishable over Mueller. Furthermore, claim 51 recites, “further comprising said partition for engaging said partition mount in said drive bay.” Nowhere does Mueller disclose a partition for engaging a partition mount in a drive bay. Because Mueller fails to disclose all of the features of claim 51, Applicant respectfully submits that claim 51 is also allowable.

Dependent claim 52 depends directly from claim 50 which, as discussed above, is distinguishable over Mueller. Furthermore, claim 52 recites, “said drive space is capable of accommodating: (a) said full-height drive that is located within a full-height drive sled or (b) when said partition is engaged to said partition mount a first and second half-height drive that are each disposed within a first and second half-height drive sled.” Nowhere does Mueller disclose any kind of a drive sled. Because Mueller fails to disclose all of the features of claim 52, Applicant respectfully submits that claim 52 is also allowable.

Independent claim 55 features a “drive bay defines a first drive space that extends between a first drive space first opening and a first drive space second opening and is capable of accommodating a first full-height drive; wherein said drive bay defines a second drive space that extends between a second drive space first opening and a second drive space second opening and is capable of accommodating a second full-height drive; wherein said first drive space first opening allows said transport assembly to insert/retract one of said plurality of data cartridges into/from one of said drives that is located in said first drive space; wherein said first drive space second opening allows a user to install/remove one of said drives into/from said first drive space; wherein said second drive space first opening allows said transport assembly to insert/retract one of said plurality of data cartridges into/from one of said drives that is located in said second drive space; wherein said second drive space second opening allows said user to install/remove one of said drives into/from said second drive space; wherein said drive bay comprises a partition mount for supporting a partition that divides said first drive space into first and second half-height drive spaces that are each capable of accommodating one of said half-height drives.”

Nowhere does Mueller disclose, for example, a first and second opening to a first

and second drive space each capable of accommodating either a full-height drive or two half-height drives. Nowhere does Mueller disclose a partition between drives dividing a full-height drive space into two half-height drive spaces, rather Mueller only makes mention of a removable partition with respect to a magazine, “Optionally, storage magazine 17’ may comprise removable partitions that can be added or removed depending on whether the storage magazine 17’ is to be used with the stacker module of the storage library 20 having operational envelope 66” (Column 6, lines 40-44). Nowhere does Mueller disclose a transport assembly that inserts or retracts a data cartridge in a drive through a first opening with capability of a user to install or remove a drive into or from a drive space through a second opening in two different drive spaces. Because Mueller fails to disclose all of the features of claim 55, it is clear that Mueller does not anticipate claim 55, and Applicant respectfully submits that claim 55 is allowable.

Dependent claim 56 depends directly from claim 55 which, as discussed above, is distinguishable over Mueller. Furthermore, claim 56 recites, “further comprising said partition engaging said partition mount.” Nowhere does Mueller disclose a partition for engaging a partition mount in a drive bay. Because Mueller fails to disclose all of the features of claim 56, Applicant respectfully submits that claim 56 is also allowable.

Dependent claim 57 depends directly from claim 56 and indirectly from claim 55 which, as discussed above, is distinguishable over Mueller. Furthermore, claim 57 recites, “one of said half-height drives located in one of said first and second half-height drive spaces.” Nowhere does Mueller disclose a half-height drive disposed in a partitioned drive space. Because Mueller fails to disclose all of the features of claim 57, Applicant respectfully submits that claim 57 is also allowable.

Dependent claim 58 depends directly from claim 56 and indirectly from claim 55 which, as discussed above, is distinguishable over Mueller. Furthermore, claim 58 recites, “a first half-height drive located in said first half-height drive space; and a second half-height drive located in said second half height drive space.” Nowhere does Mueller disclose a first and second half-height drive disposed in a partitioned drive space. Because Mueller fails to disclose all of the features of claim 56, Applicant respectfully

submits that claim 56 is also allowable.

Multiple dependent claim 59 depends directly from claim 57 and 58 and indirectly from claim 55 which, as discussed above, is distinguishable over Mueller. Furthermore, claim 59 recites, “one of said first full-height drives located in said second drive space.” Nowhere does Mueller disclose a first and second half-height drive disposed in a partitioned drive space and a full-height drive in the second drive space. Because Mueller fails to disclose all of the features of claim 59, Applicant respectfully submits that claim 59 is also allowable.

Dependent claim 60 depends directly from claim 55 which, as discussed above, is distinguishable over Mueller. Furthermore, claim 60 recites, “a first full height drive located in said first drive space; and a second full height drive located in said second drive space.” Nowhere does Mueller disclose a first and second full-height drive disposed in a first and second drive space with a first and second opening. Because Mueller fails to disclose all of the features of claim 60, Applicant respectfully submits that claim 60 is also allowable.

Independent claim 61 features “a universal bay, located within said interior space, that defines a universal space that is capable of accommodating electronic circuitry other than said electronic circuitry that is located in said circuitry space and that does not comprise said frame, said data cartridge space, said drive space, said transport assembly space, said power supply space or said circuitry space.”

Nowhere does Mueller disclose a universal bay to specifically accommodate electronic circuitry wherein the space does not comprise general circuitry including power supplies. Mueller explicitly discloses a region including general controllers, circuitry and power supplies, as shown “High-density media storage system 10 may also be provided with various ancillary devices, such as power supplies, electronic controls, input/output (I/O) devices, and data processing systems, to name only a few. These ancillary devices are commonly associated with media storage systems 12, and therefore are not shown or described herein. According to one embodiment, such ancillary devices are provided in regions 30 in storage library 20.” Furthermore, Mueller only discloses a region 30, dissimilar to a universal bay recited in Applicant’s claimed invention,

comprised by a library frame 20 unlike Applicant's universal bay which "does not comprise said frame". Because Mueller fails to disclose all of the features of claim 61, it is clear that Mueller does not anticipate claim 61, and Applicant respectfully submits that claim 61 is allowable.

Claims 73-79 are canceled without prejudice, rendering the rejection of these claims moot. Applicant may pursue the subject matter of the canceled claims in this or other related applications.

Rejections Under 35 U.S.C. § 103

Claims 29-32, 39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Caverly in view of features purportedly well known for use in the art.

Claims 29-32, 39 are amended herein to depend directly or indirectly from allowable amended claim 34. Therefore, claims 29-32, 39 are also allowable.

Claims 53, 54, 62 and 67-69 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Mueller in view of features purportedly well known for use in the art.

Claim 53 depends from independent claim 50 which, as discussed above, is distinguishable over Mueller. The Examiner admits that Mueller does not appear to expressly disclose an electrical connector arrangement for different drive arrangements, and conjectures that "electrical connectors were a required element of data storage libraries so as to enable drive units to function and would of necessity be able to be positioned in locations to connect to the drives." Even assuming, *arguendo*, that the Examiner's combination of Mueller and electrical connector arrangement for different drive arrangements is proper, and assuming that the Examiner's contention regarding the combined disclosure of Mueller is accurate, the proffered combination still fails to teach or suggest each element of independent claim 50, such as a first opening for a transport assembly to insert a data cartridge and a second opening for a user to install/remove a drive or a removable partition in a drive space to accommodate a drive form factor change, for example, and thus cannot render dependent claim 53 obvious. Applicant thus respectfully submits that claim 53 is allowable.

Claim 54 depends directly from claim 53 and indirectly from independent claim 50 which, as discussed above, is distinguishable over Mueller. Not only does the

Examiner admit that Mueller does not appear to expressly disclose an electrical connector arrangement for different drive arrangements, and conjectures that “electrical connectors were a required element of data storage libraries so as to enable drive units to function and would of necessity be able to be positioned in locations to connect to the drives”, but Examiner makes fails to mention to a connector in relationship to Applicant’s claimed electrical connectors each facing towards the second openings. Even assuming, arguendo, that the Examiner's combination of Mueller and electrical connector arrangement for different drive arrangements is proper, and assuming that the Examiner's contention regarding the combined disclosure of Mueller is accurate, the proffered combination still fails to teach or suggest each element of independent claim 50, such as a first opening for a transport assembly to insert a data cartridge and a second opening for a user to install/remove a drive or a removable partition in a drive space to accommodate a drive form factor change, for example, and thus cannot render dependent claim 54 obvious. Applicant thus respectfully submits that claim 54 is allowable.

Claim 62 depends directly from independent claim 61 which, as discussed above, is distinguishable over Mueller. The Examiner admits that Mueller does not appear to expressly disclose one or more connector boards, and conjectures that “the type of components Mueller states can be positioned in the universal space were [including] elements that would include or would be associated with connector boards.” Even assuming, arguendo, that the Examiner's combination of Mueller and one or more connector boards is proper, and assuming that the Examiner's contention regarding the combined disclosure of Mueller is accurate, the proffered combination still fails to teach or suggest each element of independent claim 61, such as a universal bay to specifically accommodate electronic circuitry wherein the space does not comprise general circuitry including power supplies or frame, for example, and thus cannot render dependent claim 62 obvious. Applicant thus respectfully submits that claim 62 is allowable.

Claim 67 depends directly from independent claim 61 which, as discussed above, is distinguishable over Mueller. The Examiner conjectures that “the type of components Mueller states can be positioned in the universal space were [including] elements that would include or would be associated with connector boards.” Even assuming, arguendo,

that the Examiner's combination of Mueller and one or more connector boards is proper, and assuming that the Examiner's contention regarding the combined disclosure of Mueller is accurate, the proffered combination still fails to teach or suggest each element of independent claim 61, such as a universal bay to specifically accommodate electronic circuitry wherein the space does not comprise general circuitry including power supplies or frame, for example, and thus cannot render dependent claim 67 obvious. Applicant thus respectfully submits that claim 67 is allowable.

Claim 68 depends directly from dependent claim 67 and indirectly from independent claim 61 which, as discussed above, is distinguishable over Mueller. The Examiner conjectures that "it was notoriously old and well known to have the provision of an interior space of a device such as a data cartridge library with a plurality of components and a plurality of component types be accompanied by an associated partitioning arrangement." Even assuming, *arguendo*, that the Examiner's combination of Mueller and a partitioning mount is proper, and assuming that the Examiner's contention regarding the combined disclosure of Mueller is accurate, the proffered combination still fails to teach or suggest each element of independent claim 61, such as a universal bay to specifically accommodate electronic circuitry wherein the space does not comprise general circuitry including power supplies or frame, for example, and thus cannot render dependent claim 68 obvious. Applicant thus respectfully submits that claim 68 is allowable.

Claim 69 depends directly from dependent claim 68 and indirectly from independent claim 61 which, as discussed above, is distinguishable over Mueller. The Examiner conjectures that "it was notoriously old and well known to have the provision of an interior space of a device such as a data cartridge library with a plurality of components and a plurality of component types be accompanied by an associated partitioning arrangement." Even assuming, *arguendo*, that the Examiner's combination of Mueller and a partition for engaging a partitioning mount to divide the universal space into first and second universal spaces is proper, and assuming that the Examiner's contention regarding the combined disclosure of Mueller is accurate, the proffered combination still fails to teach or suggest each element of independent claim 61, such as a


universal bay to specifically accommodate electronic circuitry wherein the space does not comprise general circuitry including power supplies or frame, for example, and thus cannot render dependent claim 68 obvious. Applicant thus respectfully submits that claim 68 is allowable.

Authorization To Charge Necessary Fees

While no fee is believed due with this submission, the Commissioner is hereby authorized to charge any necessary fees associated with this submission, or credit any overpayment, to Deposit Account No. 50-0289.

Respectfully submitted,

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